



Project
Tomorrow



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Speak Up

THE NEW 3 E'S OF EDUCATION: Enabled • Engaged • Empowered

*How Today's Educators
are Advancing a New Vision
for Teaching and Learning*



SPEAK UP 2010 **National Findings**

*K-12 Teachers, Librarians
& Administrators*

MAY 2011

Introduction

Fifteen years ago on March 9, 1996, over 50,000 volunteers throughout California participated in the first ever NetDay school wiring event to connect their local schools to the internet. The volunteers included technology executives and neighborhood electricians, city mayors and community organizers, pastors and philanthropists, moms and dads, teachers and students – all believing in the yet un-tested promise that internet connectivity in our schools would drive improvements in education and equalize the playing field in our most challenged communities. They secured donations of blue line wiring as well as doughnuts and coffee to fuel their efforts and painstakingly worked together pulling wiring through ceilings and walls to bring these schools into the technology age. After wiring over one-third of California schools on that one day, the NetDay “electronic barn-storming” movement spread across the United States and the world jumpstarting a new appreciation for the value of technology in education and creating a new model of engaging community support.

Those forward thinking, ambitious, “don’t tell me we can’t” volunteers in 1996 had a unique vision for their time. They believed that technology would engage, enable and empower students to a new level of learning, and that emerging technology tools and services would help students develop the skills they needed to compete in the 21st century global economy. They believed that by bringing the internet into every classroom they were in fact bringing the world and a plethora of relevant rich resources available for learning in as well. They believed that every student had a right to a high quality education, no matter where they lived, and that education was the key to breaking the cycle of poverty and underachievement. Those NetDay volunteers believed that technology not only held the promise of increasing efficiencies and productivity, but that it could be a catalyst for defining a totally new approach to teaching and learning that is more relevant to the lives of students in this new knowledge-based economy and world.

While this 1996 vision has maybe taken longer to mature than we had thought, today’s educators are also advancing a new vision for teaching and learning. Over the past fifteen years, new technologies have emerged that extend and expand upon the vision of those NetDay pioneers. Many teachers, principals, district administrators, librarians and technology leaders have taken up the mantle from their NetDay forefathers and mothers and pushed the envelope in defining and redefining what a 21st century technology-enabled classroom looks like. Over the past few years, the Speak Up research has documented this evolution by educators and specifically, we have compared educators’ adoption strategies with the ways students are both adopting and adapting new technologies to meet their needs. And while the digital disconnect between students and the adults in their learning lives is alive and well, we have noted most recently some harbingers indicating a new value proposition around digital learning by educators that holds the potential for being a new catalyst for transforming education.

Three factors are driving this new interest and enthusiasm for digital learning by educators. First, teachers and administrators are increasingly become technology-enabled themselves, using emerging technologies such as mobile devices, online classes and digital content to improve their own productivity. This development of a personal value proposition with the technology is propelling educators to think creatively about how to leverage these same tools in the classroom. Second, students and increasingly parents are demanding a different kind of learning experience and that is forcing even the most reluctant teachers and administrators to re-evaluate their perspectives about the value of technology within learning. As noted in prior Speak Up national reports, students have a very clear vision for 21st century learning. Their preference is for learning environments that are socially-based, un-tethered and digitally rich. Parents are also supportive of this new learning paradigm and as we noted in our first Speak Up 2010 report (released in April 2011) the emergence of a new trend of parental digital choice is an indication of this unprecedented support level. And schools and districts are waking up to this new trend. Concerns about parents’ capability to, for example, enroll their children in non-district provided online classes are compelling many districts to start virtual schools themselves. The third factor, the economy, and its resulting financial pressures on school and district budgets, has created a sense of urgency to more fully investigate how technologies can help educators meet their instructional goals with less expense.

All three factors converging at the same time has opened up a new window of possibilities for achieving the promise of technology to transform education. Evidence of this shift in perspective and vision by educators is noted in some comparative Speak Up findings over the past few years.

- Over twice as many teachers and administrators have a personal smart phone today than in 2008.
- While only 11 percent of teachers regularly updated their social networking site in 2007, over 44 percent are active Facebook users in 2010. Forty-five percent of administrators are also Facebook users now.
- Reflecting the exploding interest in digital content and e-textbooks, four times more administrators (35 percent) are concerned today about how to evaluate the quality of digital resources than just one year ago (9 percent).
- Thirty percent of teachers are now using podcasts and videos in their classroom instruction – an increase of over 50 percent since 2008.
- Teacher interest in teaching an online class has grown by 76 percent in just two years.
- And as classroom instruction is becoming more digitally-based, administrators are ranking digital equity and student home tech access as a much bigger issue. While only 12 percent of administrators listed digital equity as a concern in 2007, 30 percent of our education leaders today consider student access an important district challenge.

This report is the second in a two-part series to document the key national findings from Speak Up 2010. In our first report, *“The New 3E's of Education: Enabled, Engaged, Empowered – How Today's Students are Leveraging Emerging Technologies for Learning”* we explored the views of students and parents. In this companion report, *“The New 3E's of Education: Enabled, Engaged, Empowered – How Today's Educators are Advancing a New Vision for Teaching and Learning,”* we explore how teachers, principals, district administrators, librarians and technology coordinators are addressing the student vision for learning around three key trends. These trends have generated significant interest in the past year at conferences, in policy discussions and within our schools and districts: **mobile learning, online and blended learning and digital content**. While each of these trends includes the essential components of the student vision of socially-based, un-tethered and digitally-rich learning, they also provide a unique backdrop for investigating the role of educators to engage, enable and empower students through the use of these emerging technologies.

- Role of Librarians and Technology Coordinators: To enable student use of the emerging technologies through their planning, support and recommendation responsibilities.
- Role of Classroom Teachers: To engage students in rich, compelling learning experiences through the effective use of these technologies in the classroom.
- Role of School and District Administrators: To empower both teachers and students to creatively envision the future of digital learning, and to provide opportunities for exploring the elements of a new shared vision for learning.

In this report we will share the authentic, unfiltered perspectives of educators on these key trends, looking both at the perceived value of the emerging technologies as well as the barriers or challenges educators face in implementing such tools. Additionally, we will examine a new emerging vision that teachers and administrators have for leveraging technology within learning that honors the legacy of those early NetDay volunteers but also most notably, is more reflective than ever before of the students' own vision for 21st century learning.

About the Speak Up National Research Project and Speak Up 2010

Speak Up is a national initiative of Project Tomorrow, the nation's leading education nonprofit organization dedicated to the empowerment of student voices in education. The Speak Up National Research Project annually polls K-12 students, parents and educators about the role of technology for learning in and out of school and represents the largest collection of authentic, unfiltered stakeholder voice on digital learning. Since fall 2003, over 2.2 million K-12 students, parents, teachers, librarians, principals, technology leaders and district

administrators have shared their views and ideas through Speak Up. K-12 educators, higher education faculty, business and policy leaders report they regularly use the Speak Up data to inform federal, state and local education programs.

Demographics of reporting sample

In fall 2010, Project Tomorrow surveyed 294,399 K-12 students, 42,267 parents, 35,525 teachers, 2,125 librarians, 3,578 school/district administrators and 1,391 technology leaders representing 6,541 public and private schools from 1,340 districts. Schools from urban (34 percent), suburban (29 percent) and rural (37 percent) communities are represented. Over one-half of the schools that participated in Speak Up 2010 are Title I eligible (an indicator of student population poverty) and 34 percent have more than 50 percent minority population attending. The Speak Up 2010 surveys were available online for input between October 18, 2010 and January 21st, 2011.

The Speak Up surveys included foundation questions about the use of technology for learning, 21st century skills and schools of the future, as well as emerging technologies (online learning, mobile devices and digital content), science instruction and STEM career exploration. In addition, educators shared the challenges they encounter integrating technology into their schools and districts.

The data results are a convenience sample; schools and districts self-select to participate and facilitate the survey-taking process for their students, educators and parents. Any school or school district in the United States is eligible to participate in Speak Up. In preparation for data analysis, the survey results are matched with school level demographic information, such as Title I, school locale (urban, rural and suburban), and ethnicity selected from the Core of Common Data compiled by the National Center for Education Statistics (<http://nces.ed.gov/>). The data is analyzed using standard cross-tab analysis and key variables (such as internet and device access) are tested for statistical significance.

To minimize bias in the survey results, Project Tomorrow conducts significant outreach to ensure adequate regional, socio-economic and racial/ethnic/cultural distribution. To participate in Speak Up, organizations register to participate, promote the survey to their constituents and schedule time for their stakeholders to take the 15 to 20 minute online survey. Starting in February 2011, all participating organizations receive free, online access to their data with comparative national benchmarks. Staff from Project Tomorrow summarize, analyze, and verify the national data through a series of focus groups and interviews with representative groups of students, educators and parents.

Inside today's classroom

To best understand this new vision for engaging, enabling and empowering learning through technology, it is first imperative that we understand the realities of technology use in today's classroom. Teachers and administrators both report using a wide variety of technology tools and services for their professional tasks. And their usage closely mirrors the students' own vision for socially-based, un-tethered and digitally rich learning – but of course to a much lesser degree of frequency or depth. Almost all teachers (96 percent) and administrators (99 percent) are tapping into communications tools to connect with peers or parents; though a far lesser amount of teachers (36 percent) are using these same tools to connect with their students. Educators are regularly using the internet for research (almost 90 percent) and reading text-based resources (61 percent) including blogs and wikis (33 percent). Slightly more administrators (68 percent) than teachers (53 percent) are creating multi-media presentations. Administrators are also demonstrating some advanced technology skills by participating in webinars (66 percent) and professional online communities (60 percent). Two-thirds of teachers are taking advantage of school portals and uploading class information to keep students and parents informed about grades, homework and class activities. Teachers are also on the vanguard of social networking with

regular updates to their personal profiles (45 percent); only 29 percent of administrators are part of the Facebook crowd today.

And while this current snapshot definitely represents more sophisticated personal use of technology by educators than even two years ago, the description of how technology is being used to advance student learning is still a mixed bag of results (Table 1).

Table 1: How do you use technology to facilitate student learning?		
Use of Technology	2008	2010
Track effort to achievement	12%	16%
Facilitate group collaborations	22%	32%
Set student objectives	33%	34%
Note taking and info synthesis	27%	37%
Provide feedback	38%	38%
Create cues or questions	30%	40%
Create physical models	33%	41%
Conduct investigations	20%	47%
Create graphic organizers	33%	51%
Homework and practice	36%	58%

Homework and practice not only continues to be the #1 way that teachers are using technology for student learning, but the percentage of teachers using technology for that objective specifically has increased by 61 percent. Several more sophisticated uses of technology were significantly higher in 2010 than in 2008 with the largest increases in conducting investigations (27 percentage points) and creating graphic organizers (18 percentage points). However, the sustained use of technology in the classroom is often most evident by examining how technology is used to set student objectives, provide feedback to students on performance, and to track the relationship between students' efforts and achievement. In each of these critical uses, there was little or no growth from 2008 to 2010, indicating that while teachers may be using technology more often, the usage may still be sporadic or lesson dependent. We still have more work to do, therefore, to ensure that the effective use of technology is fully integrated into all functions of the classroom if we wish to achieve that promise of increased efficiencies and transformative learning.

Teachers' statements, however, about the impact of technology on both their students' academic success (Figure 1) and their own effectiveness (Figure 2) are both very positive and enlightening as they represent the teachers' own value perspectives as well.

Figure 1: Teachers' View - Impact of technology on my students

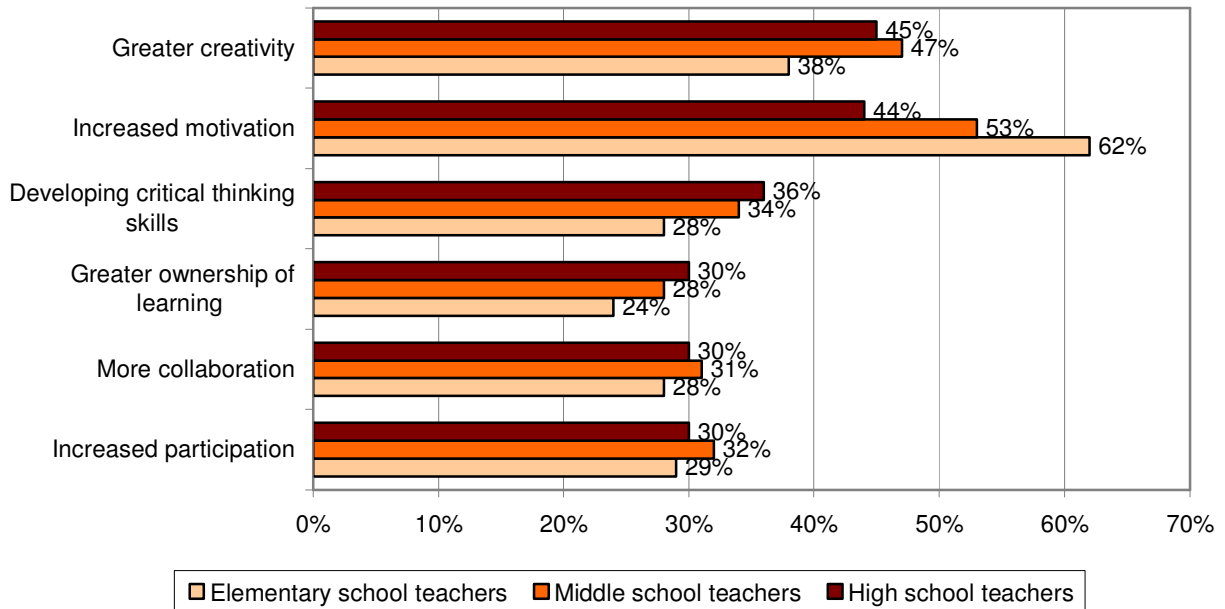
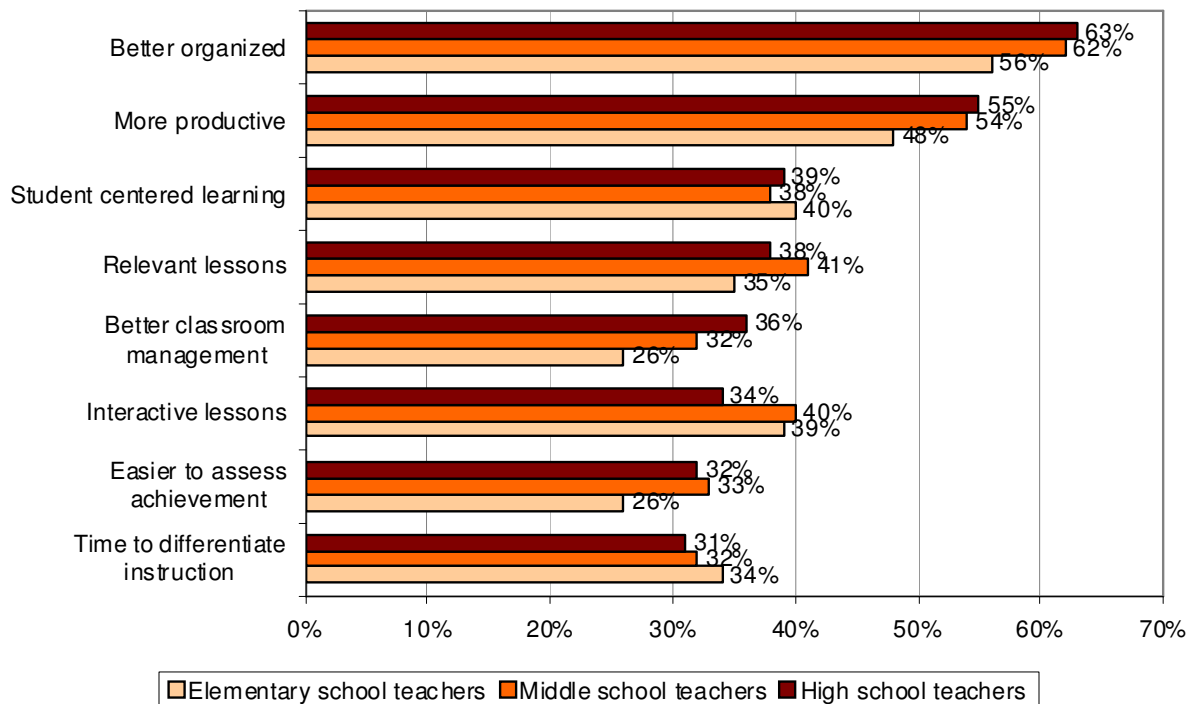


Figure 2: Teachers' View - Impact of technology on my effectiveness



The value statements of middle school and high school teachers are more closely aligned with each other underscoring the fact that the facilitation of technology is often different in these subject-specific classrooms than in the multi-subject classrooms in elementary school. Interestingly, though, it is the elementary teachers who have noticed the greatest impact on student success around motivation to learn (62 percent vs. 44 percent for high school teachers). Besides that motivation factor, though, the highest values were awarded to the impact on teachers' own effectiveness. Almost two-thirds of secondary teachers and 56 percent of elementary teachers say they are better organized as a result of the use of technology in their classroom, and nearly a majority of teachers across all grade levels say they are more productive. When disaggregated for years of teaching experience, we see that 68 percent of teachers with 1 to 3 years of experience say that technology has increased their effectiveness by making them more productive. Those same newbie teachers (45 percent) are also much more likely than their more veteran peers with 16 + years of experience (31 percent) to say that technology is enabling them to create more interactive lessons. For many policymakers and researchers, the most solid predictor of student success is teacher effectiveness. It is, therefore, very promising that increasingly teachers themselves are articulating the impact of technology as improving their own classroom effectiveness, and it is especially assuring to see such strong statements from our newest generation of teachers.

While our teachers are leveraging many different technologies to different degrees of depth and complexity to engage students in learning, our administrators who have the responsibility of empowering schools with such technology face some formidable challenges. Besides the ongoing funding issues associated with acquiring, implementing and maintaining the technology infrastructure, both principals and district administrators also report these as top challenges: staff professional development (48 percent), technology support (30 percent), digital equity issues (30 percent) and student safety online (19 percent).

Additionally, a quarter of principals and 28 percent of district administrators note that evaluating the plethora of emerging technologies is a significant challenge for their district right now. Included in those emerging technologies that are perplexing administrators are mobile devices, online and blended learning and digital content. All three of these key trends in education technology have immense potential to enable, engage and empower learning for students. The question therefore for education leaders is not about the potential, but rather about how to most effectively harness these technologies within daily classroom use. In the following three sections of this report, we will explore how teachers, librarians and administrators are approaching this challenge to enable, engage and empower a new vision of learning.

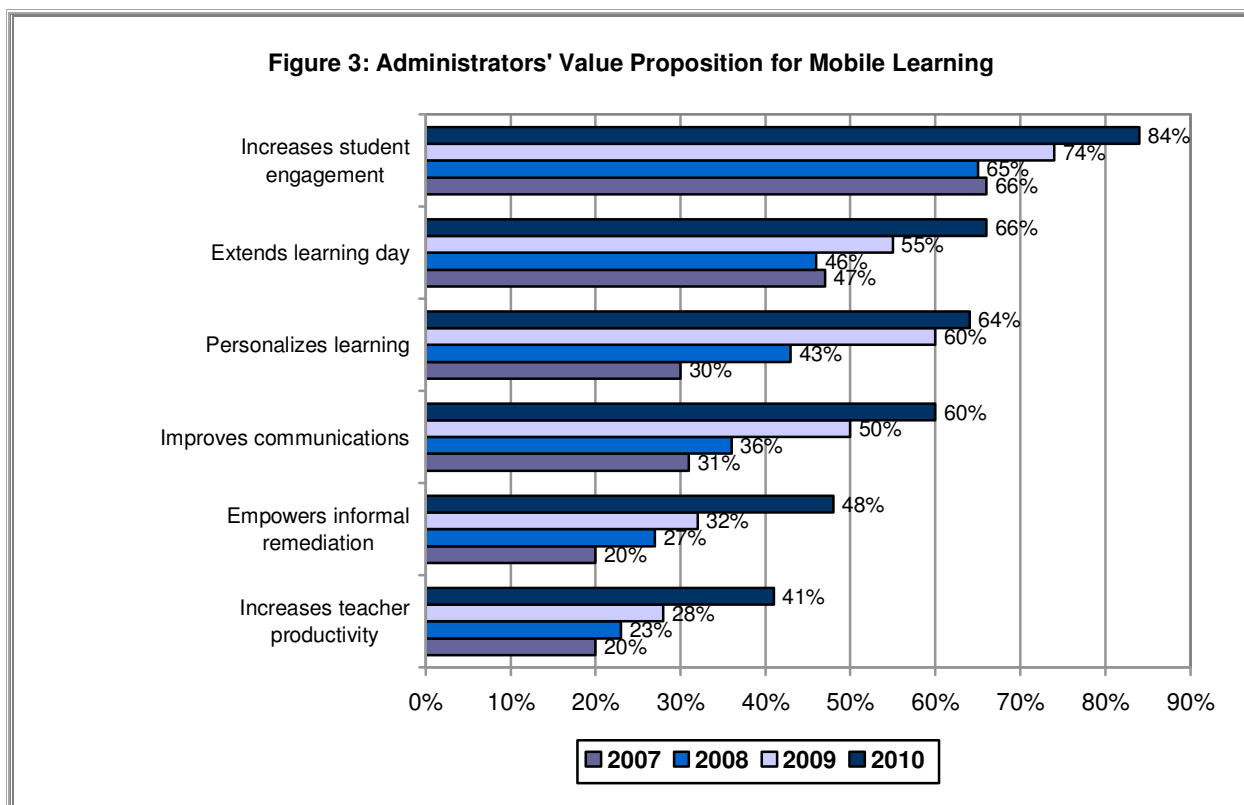
Key Trend 1: Mobile Learning

Within the past year, we have seen a huge increase in interest across the education sector in mobile learning – the leveraging of small, portable devices to facilitate anytime, anywhere, un-tethered learning. Some of this interest, especially on the part of education leaders, has been fueled by the desire to replicate the benefits of laptop/netbook one-to-one programs that have been implemented in some schools and districts but without the significant price tag typically associated with those initiatives. Additionally, as teachers, principals and district administrators have become mobile device users themselves, some have started to creatively envision the potential of these devices within instruction. As noted in our earlier report on the Speak Up 2010 student findings, the proliferation of a wide range of mobile devices in students' pockets and backpacks has also been a catalyst for this new interest within education circles. As an example, 44 percent of high school students and a one-third of middle school students say they now have personal access to a smart phone; a 42 percent increase in just one year from the Speak Up 2009 data findings.

Both teachers and administrators voice strong support for the potential benefits of mobile devices within instruction, with slight differences in their rank order of those benefits. Teachers highly value the ability of the devices to increase student engagement in learning (77 percent), to facilitate improved communications between teachers, parents and students (64 percent) and to access online textbooks anytime, anywhere (64 percent). Administrators note the same benefits but with stronger validation of the student engagement

component (84 percent) and adding in the idea that the devices can extend learning beyond the school day (66 percent) or create opportunities for more personalized learning experiences (64 percent).

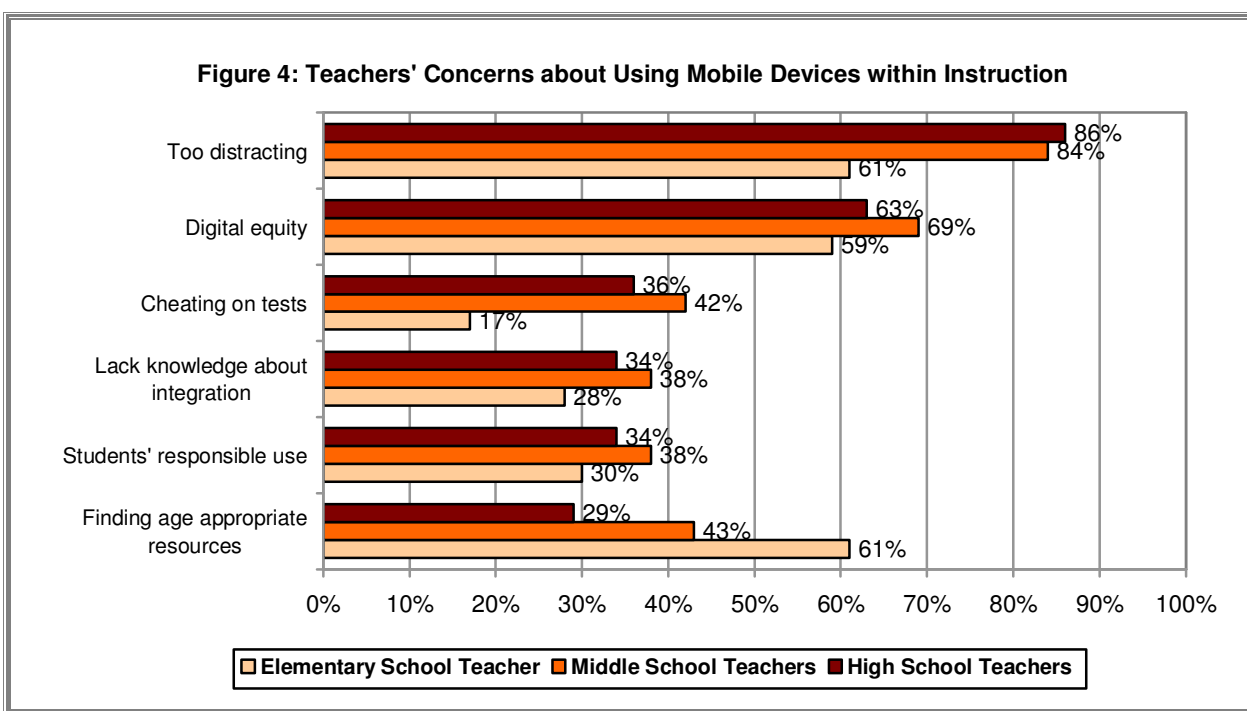
As noted in Figure 3, our administrators have come a long way in terms of reaching these high value statements about mobile devices over the past few years. This escalation in terms of valuing mobile learning mirrors the rise in administrators' personal experiences with these highly connected, multi-functional pocket devices. For example, 58 percent of today's administrators tell us they use a smart phone; in 2008 only half as many were smart phone users.



In a similar way we see that teachers who are smart phone or tablet computer/iPad users (we call this cohort Mobile Learning Explorers) have more intense feelings about the value of mobile devices within learning than teachers who are not yet mobile-enabled. For example, 64 percent of teachers who own a smart phone or iPad can see the value of mobile devices to facilitate personalized learning; only 53 percent of non-mobile using teachers share that same value. Interestingly, we see little differentiation in these value statements based upon classroom grade level or teaching assignment, community type (urban, rural or suburban) or community poverty level indicated by school Title 1 qualification. We do, however, see a difference in the percentage of teachers that have mobile devices based upon years of experience. For example, while 79 percent of teachers with 1 to 3 years of experience have an MP3 player, 43 percent of their counterparts with 16 + years of experience are not yet wearing ear buds to listen to music. We see a similar trend with smart phone access. Only one-third of teachers with 16 + years of experience say they have a smart phone while over half of new teachers with less than 3 years of experience are already smart phone users. Overall the trend just like the rest of the general population, is for our teachers and administrators to increasingly become mobile users and that firsthand, personal experience is helping them see the potential of these devices to increase productivity and enable, engage and empower learning.

But this mobile learning trend is not without real challenges in the classroom. Will students use their smart phone to cheat on tests? Will I lose control of my class if we allow students to bring in and use their own devices? And how can we effectively use these devices for reach academic work if not every student has one? What curriculum supports mobile learning? These are just some of the many questions that are being discussed and debated in teacher workrooms and district board rooms all across the country. Some innovative schools and districts are already testing these waters through a variety of mobile learning projects and their experiences are helping to inform the national discussion.

We surveyed both teachers and administrators to better understand their top concerns and the barriers that are holding back greater adoption of mobile learning. As noted in Figure 4, teachers from kindergarten through 12th grade are most concerned that these very engaging mobile devices might simply be too compelling and distracting for their students, at least when they are in their classroom. Interestingly, when we disaggregate the data and again examine the views of teachers who are already smart phone users this issue of distraction is still a real strong concern. Overall, 75 percent of mobile-enabled teachers continue to rank “too distracting” as their #1 concern. It is therefore understandable why over a quarter of teachers also note that one of their most significant challenges is that they do not know how to most effectively leverage these devices within instruction.



This issue of teacher training about how to effectively use mobile devices within instruction is a serious concern for administrators as well. As noted in our student and parent report, we asked administrators to comment on the idea of allowing students to bring their own mobile devices to school to use within instruction. This concept called “Bring Your Own Technology” or BYOT is being piloted in several schools and districts this year. Despite that, overwhelmingly, almost two-thirds of administrators (63 percent) gave a thumbs down to the idea of allowing student owned devices in school. When asked about the barriers to BYOT, the #1 concern from administrators was the lack of teacher skill in how to effectively leverage these devices within instruction. As evidenced by Table 2, for district administrator this challenge of teacher skills trumped even “too distracting” and “network security concerns” as the chief barriers.

Table 2: What is preventing you from allowing students to use their own mobile devices at school for academic purposes?

Preventing Factors	Principals	District Administrators
Lack of teacher skills	56%	62%
Network security concerns	55%	53%
Challenges of multiple platforms	35%	49%
Digital equity	46%	46%
Too distracting	49%	43%
Internet safety	48%	42%
Potential theft	57%	38%

Bottom line for Trend 1: Both teachers and administrators recognize the potential of mobile devices to enable, engage and empower student learning with significant benefits. However, to fully leverage these benefits in the classroom, teachers need new training and support mechanisms to bridge the gulf between their high value statements and their real, tangible concerns about effective classroom use.

Key Trend 2: Online and Blended Learning

Both students and their parents are increasingly interested in online and blended learning environments to not only offer expanded course options and address scheduling concerns, but also to provide a more personalized, learner-centric academic pathway. When asked about why they would like to take an online class, middle school students identified a desire to be in control of their own learning (45 percent), to get extra help in a challenging subject (44 percent) and to work at their own pace (42 percent). And five times as many parents in 2010 would incorporate online classes into their vision of the ultimate school for their child than in 2008.

Administrators are also recognizing that the value of online and blended learning extends beyond offering additional Advanced Placement courses. As illustrated in Table 3, school and district administrators are placing a higher value today on leveraging online learning to keep students engaged in school and address remediation issues, thus, potentially increasing graduation rates.

Table 3: What are your top priorities for offering online learning to your students?

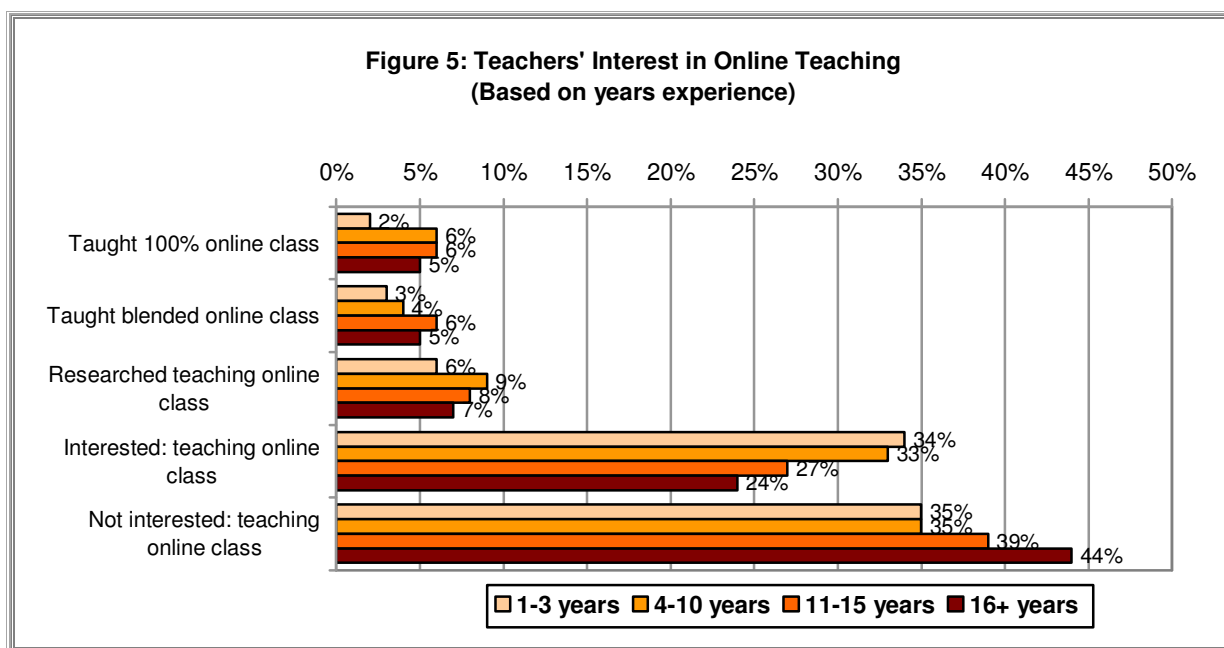
Top Priorities	Administrators
Keep students engaged	38%
Academic remediation	33%
Increase graduation rates	33%
Offer scheduling alternatives	28%
Address at risk students	24%
Credit recovery	21%

Table 4: What barriers are preventing you from offering or expanding online learning for your students?

Barriers	Administrators
Quality of interaction	30%
Lack of funding	30%
Creating rigorous courses	28%
Evaluating course quality	26%
Tech support	24%
Lack of teacher interest or skill	13%

As with mobile learning, however, administrators face real, tangible barriers to empowering online student learning. Beyond the financial concerns, administrators are also concerned about the quality of teacher-student interactions online and how to create or evaluate the rigor of online courses (Table 4). Despite the growth in teacher interest in online teaching over the past few years, building staff capacity to support online learning continues to be a top concern for both school and district level administrators.

As administrators seek staff to teach online courses, the analysis of this year's Speak Up indicates that the most likely audience for recruitment are teachers with fewer than 10 years of experience (Figure 5). While one-third of teachers in that cohort indicate an interest in teaching an online class, the interest level for teachers with more than 11 years of experience falls to approximately 25 percent. Another potential audience is teachers that indicate a preference for online professional development. Forty percent of teachers that stated "online courses are my preferred professional development methodology" also indicated an interest in teaching online.



There remains a persistent percentage of teachers across all years of experience (averaging at 39 percent), however, that say they have no interest in teaching an online class. Given the increased demand for online learning, this creates a significant supply-demand problem for our schools and districts. For the first time in Speak Up 2010, we polled teachers on a range of incentives to better understand what might motivate them to consider teaching an online course. As we see in Table 5, teachers say flexibility in work conditions, increased compensation and the ability to work with more motivated students are some of the most appealing carrots to entice them into online teaching. What is equally interesting is the fact that teachers are less interested in the other nationally discussed motivators such being able to create their own course (17 percent), increased prestige and professional recognition (15 percent), teaching gifted or at risk students (15 percent) or developing a more personalized teaching style (13 percent). Across the board, the interest in the top incentives is intensified if the teacher has already taught an online class or if they have taken an online course for professional development. What is also noteworthy, however, is that having a personal, first hand experience with an online class is not perceived by the teachers as a significant motivator on its own.

Table 5: What would motivate you to teach an online class?			
Motivating Factors	All	Taught online course	Took online PD course
Work conditions flexibility	53%	63%	67%
Increased compensation	48%	56%	58%
Provided with technology	39%	48%	48%
Work with motivated students	33%	41%	44%
Provided with curriculum	32%	40%	40%
Training	30%	36%	34%
Work with other online teachers	29%	35%	35%
Co-teach online class	29%	33%	33%
Personal experience with online class	17%	19%	25%

Bottom line for Trend 2: To meet the increased demand for online learning from students and parents, and to fully realize the potential for online learning as a tool to increase student graduation rates, we must address staff capacity issues. Engaging teachers in online teaching has the double benefit of providing additional capacity as well as being a catalyst for redefining key attributes of the teaching profession.

Key Trend 3: Digital Content

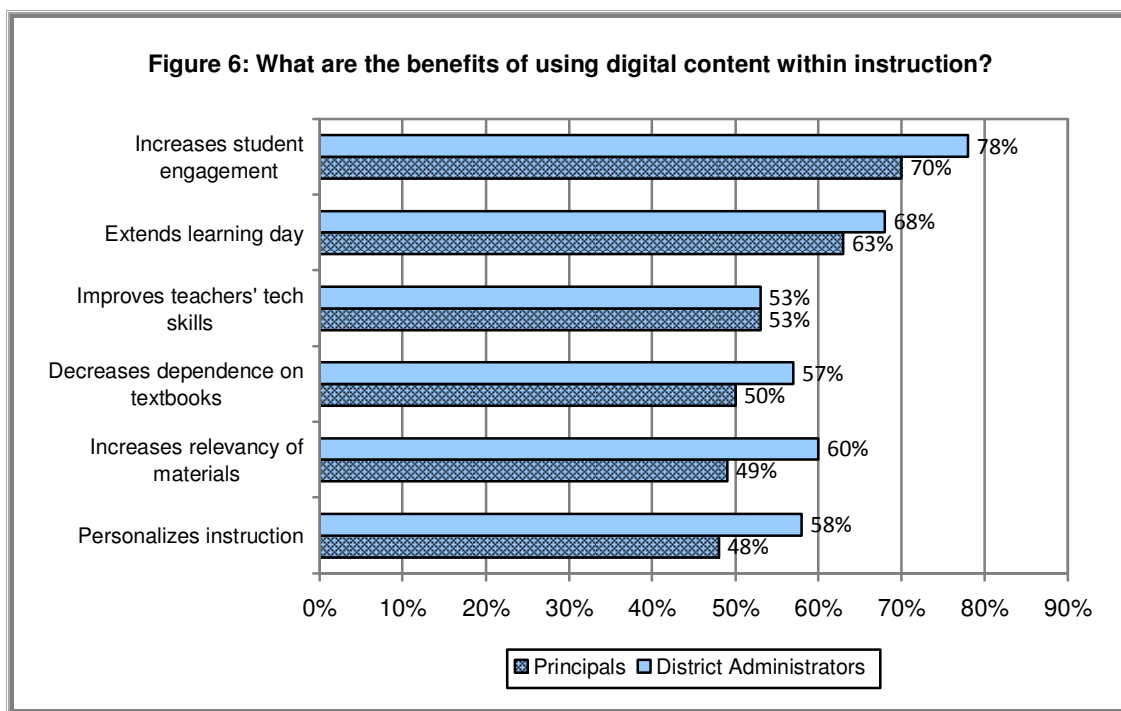
The ongoing impact of the fiscal and budget challenges in many districts is driving much of the interest in e-textbooks and digital content today. Policymakers and administrators are intrigued with the twin objectives of leveraging existing technology and lowering (or even eliminating) the costs associated with traditional textbooks. Additionally, strong support from parents and students is providing validation for exploring how to enable and empower increased student achievement through digital resources.

Students view the use of a wide range of different digital resources within instruction as the optimum way to increase the relevancy of the learning process. While teachers' use of digital content is still nascent in the classroom, we are starting to see the emergence of some preferences, though dependent upon the grade level assignments. So, for example, elementary teachers are more than twice as likely to use game-based environments and virtual field trips in their classroom as high school teachers (Table 6). Middle school and high school teachers are correspondingly more likely to integrate virtual labs and podcasts into their instructional plan. Podcasts and videos are starting to find a viable home in classrooms nationwide with some innovative teachers using these tools in a variety of creative ways such as providing recorded lectures for students to access later, facilitating student developed media projects, and accessing primary sources materials to add context to the learning process. In fact, teacher usage of podcasts and videos within the classroom increased over 50 percent just since 2008; though it should be noted that the percentage of teachers using these tools is still less than one-third.

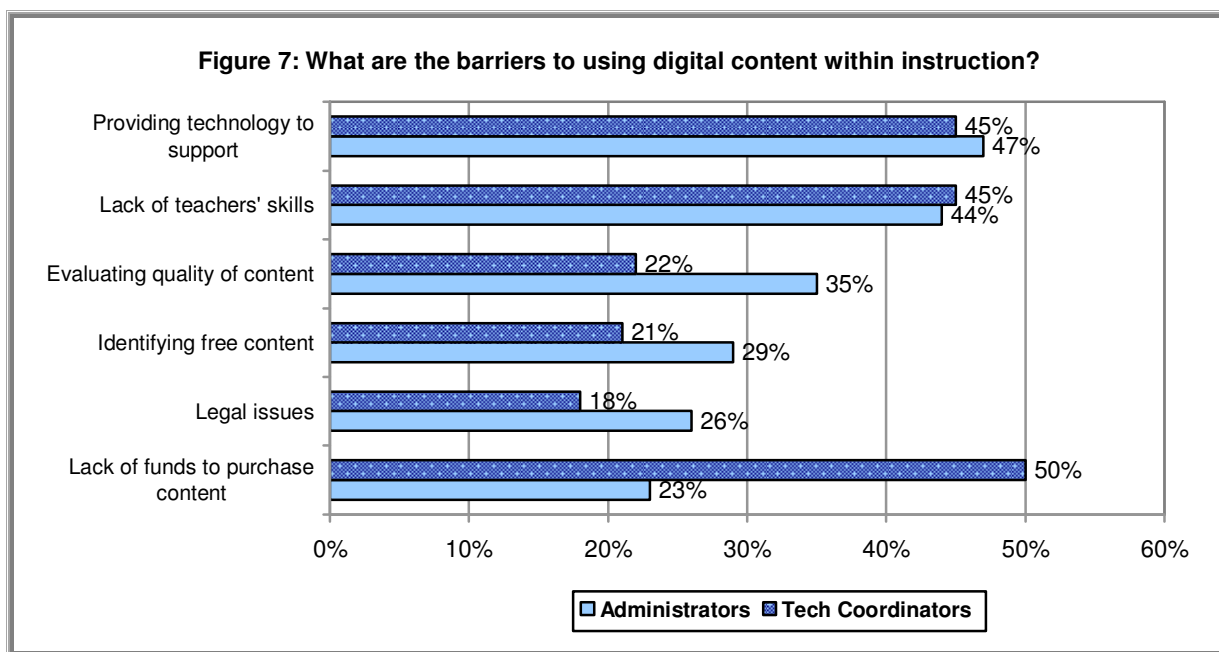
Table 6: Digital Content in the Classroom What are teachers using and librarians recommending?				
Digital Content	Teachers' Usage Gr K-5	Teachers' Usage Gr 6-8	Teachers' Usage Gr 9-12	Librarians' Recommendations
Virtual labs	4%	9%	11%	11%
Games	32%	21%	13%	16%
Animations/simulations	18%	21%	26%	16%
Online textbooks	26%	28%	26%	19%
Virtual field trips	22%	14%	11%	31%
Podcasts/videos	28%	34%	36%	38%
Skill development software	52%	31%	21%	39%
Real time data	27%	24%	10%	40%

The role of the school librarian is increasingly focused around the use of digital content in the classroom. Librarians or media specialists in many schools have the responsibility for identifying, evaluating and recommending digital resources to teachers. On one level, the school librarian is the “go-to” person to identify websites for classroom use (78 percent), create collections of resources for curriculum support (56 percent) and to find specific digital content, podcasts and videos to support classroom lessons (47 percent). However, librarians are also enabling and empowering teachers’ skills with digital content – answering questions about technology tools (85 percent), participating with teachers in professional learning communities (66 percent) and training teachers how to locate and evaluate digital content (33 percent). With the increased variety and depth of the digital resources available for classroom use, the librarian is emerging as a critical player in enabling the use of these tools in the classroom, taking on the twin roles of cheerleader and exploration sherpa.

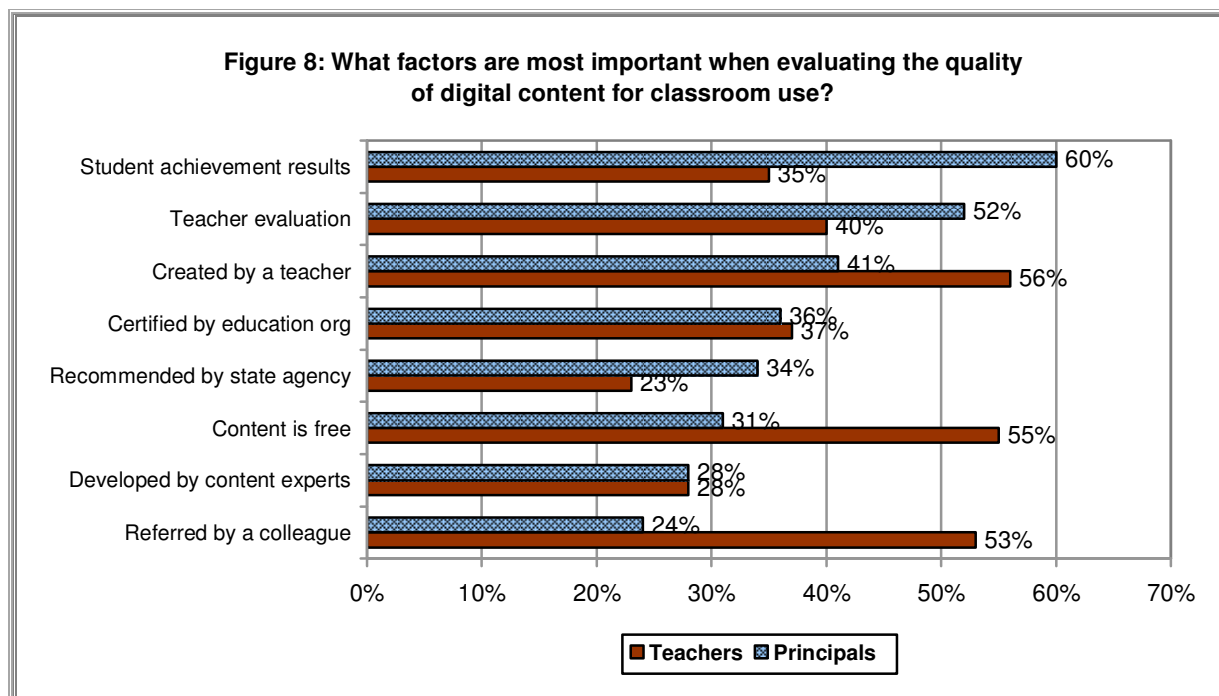
As with mobile devices and online learning, both principals and district administrators understand the value of digital content as a vehicle for engaging students in learning. Additionally, the administrators buy into the student vision and appreciate how the use of such resources can increase the context or relevancy of instruction and also, provide unique opportunities for personalizing learning (Figure 6). In the ongoing quest to improve teachers’ skills with technology, it is also noteworthy that both principals and district administrators view the use of digital content as a means to this end as well. Districts, for example, that have replaced traditional textbooks with e-textbooks are in affect, eliminating the optional aspect of their teachers to use technology within learning.



Administrators and school technology coordinators both recognize that this topic of teacher skills is a significant barrier to greater usage of digital content (Figure 7) – as significant, in fact, as providing appropriate technology support. Their concerns are justified. When asked to describe how they are using technology on any given day in their classroom, only one-third of teachers say they are creating a digitally-rich learning environment using tools such as games, animations, simulations and videos, and only 25 percent are providing opportunities for students to create their own digital content using multi-media tools to present information or represent knowledge.



Besides the disconnect between the administrators' vision for digital content usage and the teachers' classroom reality, another difference of opinion exists around how to most effectively evaluate the quality of digital resources for instructional use. Teachers place a higher premium than principals do on digital content that is free, created by a teacher or recommended to them by a colleague (Figure 8). Principals, however, will first evaluate the efficacy of a digital resource based upon student achievement results from the use of that tool, and then consider a teacher's evaluation secondarily.



This disconnect between the value propositions of principals and teachers has interesting ramifications as schools and districts explore how to expand the role of digital content within instruction. In some schools, teachers have the authority to select their own digital resources; in others, that responsibility is held by a district committee. In the middle of many of these discussions is the school librarian. The librarian view on how to effectively evaluate digital resources is an interesting blend of the teachers' and principals' points of view. Within the librarians' evaluation rubric, the most important factors when recommending digital content to teachers are:

- Content accuracy (81 percent)
- Ease of use by teachers and students (76 percent)
- Alignment to curriculum standards (73 percent)
- Credibility of the content publishing organization (66 percent)
- Cost (60 percent)
- Level of engagement and interactivity (50 percent)

For the teacher, the value of a colleague referral or knowing that the material was created by a teacher is that "it will work as advertised." The librarian rubric for evaluating digital content accomplishes that mission for the teacher since it highly values content accuracy, ease of use and level of engagement. Correspondingly, for the principal, the focus on student achievement results is covered in the librarians' rubric by the alignment to curriculum standards and credibility of the publishing organization. Thus, in addition to the roles of digital content cheerleader within their schools, librarians are also increasingly going to be called upon to be the arbitrator of quality and appropriateness for classroom instruction.

Bottom line for Trend 3: Teachers' adoption of digital content in the classroom is being empowered by their administrators' vision for learning, and enabled by the new role of the school librarian or media specialist as a partner in the process of identifying and evaluating appropriate tools to more fully engage students in the learning process.

Ending Thoughts

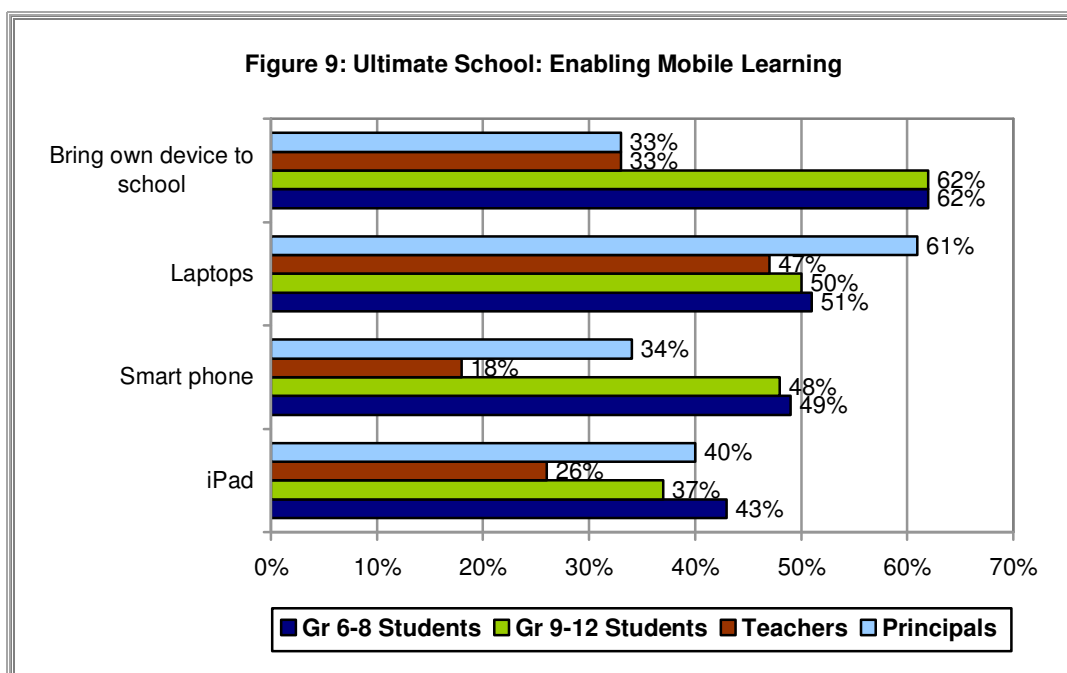
Our first report on the Speak Up 2010 national findings, "The New 3 E's of Education: Enabled, Engaged, Empowered – How today's students are leveraging emerging technologies for learning," focused on the authentic, unfiltered views of students and parents and their use of emerging technologies such as mobile devices, online and blended learning, and e-textbooks and digital content, both in and out of school. As we have noted, students have a very distinct vision of the power of socially-based, un-tethered and digitally-rich learning to improve their academic performance and prepare them to participate and compete in the global knowledge economy. And most importantly, the students realize that to achieve this vision, technology must be more effectively used and leveraged within learning. The students can, in fact, visualize their ultimate school where they would have access to a rich and varied set of digital tools and resources that provide gateways to new learning experiences not bound by their classroom walls. And these experiences would be highly personalized to meet their specific needs and provide ample opportunities to collaborate with peers and experts. In many ways, the key trends we reported on (mobile learning, online and blended learning, and e-textbooks and digital content) provide a solid foundation for transporting that student vision of their ultimate school from the hypothetical to reality. *So, what is standing in the way of this progress? Why can't we implement this student vision of learning today?*

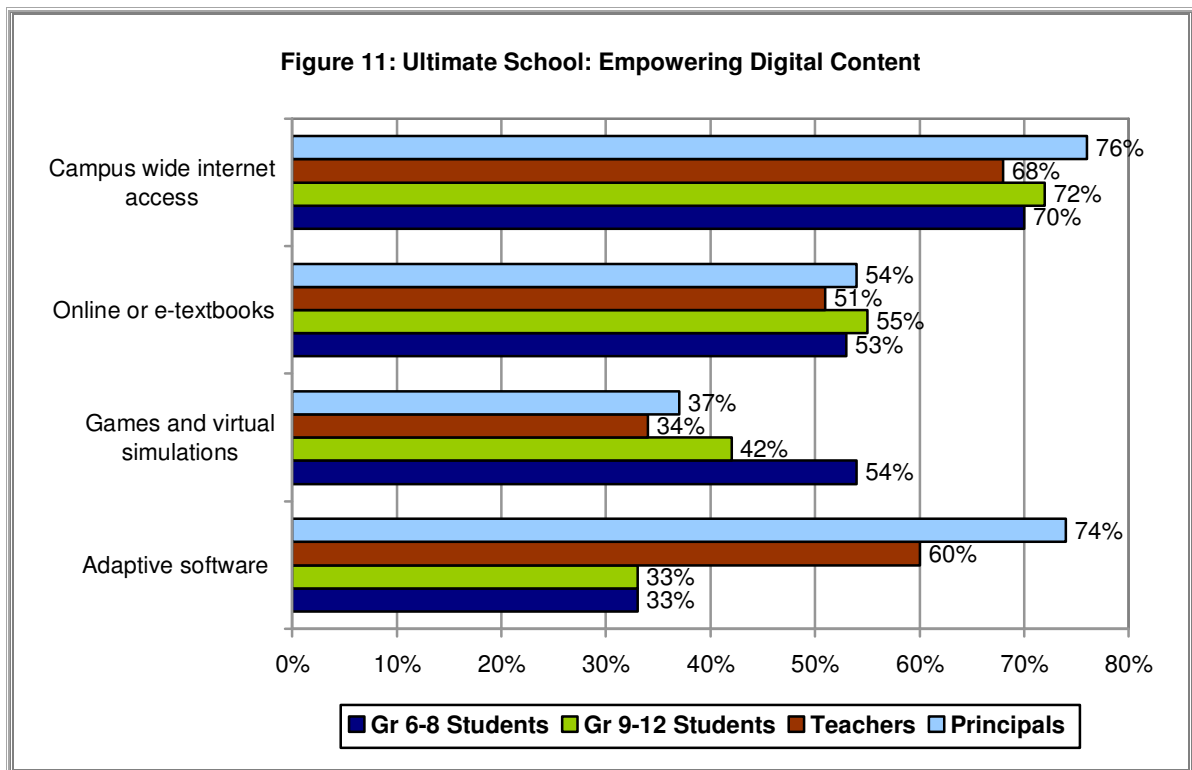
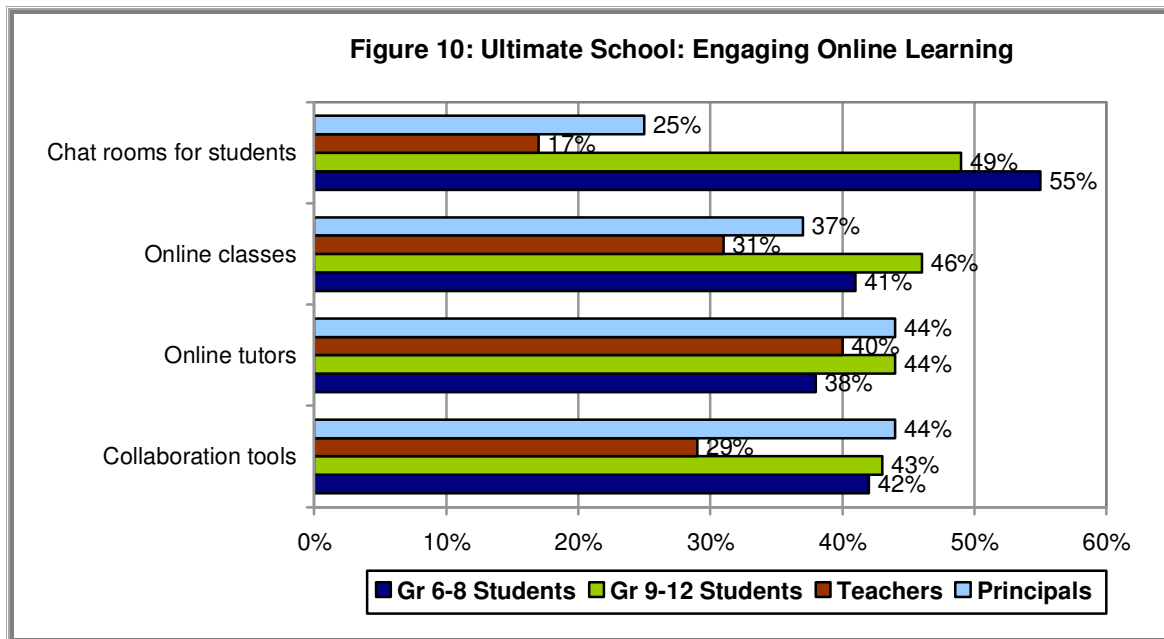
Enabling. Engaging. Empowering. In this second report, we have shared the views and perspectives on the role of these emerging technologies within learning through the eyes of teachers, librarians, principals and district administrators. In many ways, librarians and administrators hold the keys for empowering and enabling this student vision. And our teachers are definitely on the front line of leveraging technologies that not just engage the learner, but ignite a new, insatiable curiosity for more knowledge. While our educators (including

90 percent of administrators and 94 percent of librarians) highly value the importance of instructional technology for student success, the picture is not complete with a reality check on the challenges and concerns that are slowing down the adoption process. While funding and budgets stand out as primary issues at the national, state and local levels, administrators are also uneasy across the board about teachers' capabilities and capacities for effectively integrating these new technologies into instruction. Additionally, as classrooms become digital learning spaces where daily instruction is enabled fully by such technologies, teachers and administrators are both concerned about the students who do not have access to these same tools outside of school. Is the greater adoption of these technologies inadvertently creating an equity crisis for the students who don't have the most advanced smart phone or broadband internet access at home? The plethora of mobile applications, online learning courses and digital content also has spawned a new anxiety about how to sift through all of the choices and effectively evaluate the quality, rigor and appropriateness of these resources for classroom use. And then there is also the ongoing challenge of creating a vision for the future of learning that is shared by everyone in the community – teachers, administrators, parents and students.

Do we have a shared vision for the future?

To help inform national policies as well as local school plans, we ask the stakeholders in this discussion each year to envision the ultimate school and to identify the technology tools and services that they believe would have the greatest impact on learning and achievement. While it is instructive to review these results to better understand the individual priorities of students, teachers and administrators, it is also important to use this data to evaluate these key questions: do we have a shared vision for the future, are we on the same page, how do we get there? As is evident by Figures 9, 10, 11 regarding the key trends discussed in this report, we have some more work to do on creating that shared vision about which technologies to adopt to enable the future of learning.





Our nation's schools and districts are at a critical crossroads. Buoyed by the student vision for socially-based, un-tethered and digitally-rich learning, many administrators and teachers now see the potential of emerging technologies such as mobile learning, online and blended learning and digital content as viable pathways to transforming education. The process of translating that vision into practice is not without serious challenges, however, as noted in this report. Somewhat defying conventional wisdom, though, these challenges also create

new opportunities – opportunities to think differently, for example, about how to evaluate emerging technologies, how to prepare teachers to use these tools effectively in their classroom, what is the new role for school librarians, how to use the technology tools and devices that students already have, how to create new connections within the education community, and how to restructure budget line items that enable more digital teaching and learning. Just as was demonstrated through the NetDay wiring efforts in 1996, a unique window is open right now for schools and districts to creatively and courageously explore these questions and to engage all education stakeholders in the development of a new shared vision for the future of learning.

The goal of the Speak Up process and reports each year is to provide guidance and support to schools, districts and communities on this journey to create new learning environments for their students – environments that address the three new “E’s of Education” - enable, engage and empower. We hope that through this two part series of reports based upon the Speak Up 2010 national findings we have both honored the legacy of our founding organization, NetDay, in its intent to stimulate transformative thinking about education, and have provided new insights into the views and perspectives of students, parents and educators on how emerging technologies can help to create the ultimate schools for today’s learners.

Learning that is enabled, engaged and empowered. A shared vision for the future that we can implement today through the effective use of emerging technologies such as mobile learning, online and blended learning, and digital content.



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The Speak Up National Research Project annually polls K-12 students, parents and educators about the role of technology for learning in and out of school and represents the largest collection of authentic, unfiltered stakeholder voice on digital learning. Since 2003, over 2.2 million K-12 students, parents, teachers, librarians, principals, technology leaders and district administrators have shared their views and ideas through Speak Up.

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